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AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

Please amend claims 14, 52-54 and 56-62.

Please cancel claims 55 and 63-65.

Please add new claims 66-79.

1. (Previously Presented) A method of providing direct access to a voice mail system (VMS) hosting a voice mail box associated with a service subscriber, the method comprising steps of:

formulating a call set-up message for initiating the establishment of a call connection to the VMS without first attempting to complete a call to the service subscriber, the call set-up message having a format reserved for a redirected call set-up message issued by a service switching point (SSP) in response to an uncompleted call to the service subscriber; and

issuing the call setup message into a common channel signaling (CCS) network to initiate the establishment of the call connection directly to the voice mail box of the service subscriber.

2. (Original) A method as claimed in claim 1 wherein the CCS network uses signaling system 7 (SS7) protocol, and the step of formulating a call set-up message further comprises steps of:

instantiating an integrated users digital network-user part (ISUP) initial address message (IAM);

inserting a directory number (DN) of the VMS into a called party number parameter in the IAM; and

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inserting a redirecting number parameter, an original called number parameter, and a redirection information parameter into the IAM, in conformance with a SS7 standard.

3. (Original) A method as claimed in claim 2 wherein the step of inserting comprises a step of inserting the service subscriber's DN into the original called number and the redirecting number parameters, in conformance with the SS7 standard.

4. (Original) A method as claimed in claim 2 wherein the step of inserting further comprises a step of inserting a redirecting reason code into a redirection information parameter, the reason code being used by the VMS to select a voice mail prompt to play to the calling party.

5. (Original) A method as claimed in claim 2 wherein the step of inserting further comprises a step of inserting a redirecting reason code into the redirection information parameter, the reason code being a default value indicating that the reason for redirection is unknown or not available.

6. (Previously Presented) A method of providing direct access to a voice mail box of a service subscriber to a voice mail system (VMS), the method comprising steps of:

receiving at a call control application, a message sent in response to a request for direct access to the voice mail box by a requesting party;

formulating a call setup message for initiating establishment of a call connection between the requesting party and the VMS without first attempting to complete a call to the service subscriber, the call setup message having a format reserved for a redirected call setup message issued by a service switching point (SSP) in response to an uncompleted call to the service subscriber; and

sending the call set-up message into the CCS network to initiate the establishment of the call connection.

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7. (Original) A method as claimed in claim 6 wherein the CCS network uses signaling system 7 (SS7) protocols, and the step of formulating a call setup message further comprises steps of:

instantiating a default integrated users digital network-user part (ISUP) initial address message (IAM);

inserting a directory number (DN) of the VMS's into a called party number parameter of the IAM; and

inserting a redirecting number parameter and an original called number parameter in the IAM, in conformance with a SS7 standard.

8. (Original) A method as claimed in claim 7 wherein the step of inserting comprises a step of inserting a DN of the service subscriber into the original called number and redirecting number parameters, in conformance with the SS7 standard.

9. (Original) A method as claimed in claim 8 further comprising a step of inserting a redirecting reason code into a redirection information parameter, the redirecting reason code identifying the IAM as a request to leave a voice message with a direct to voice mail call.

10. (Original) A method as claimed in claim 8 further comprising a step of inserting a default value redirecting reason code into the redirection information parameter.

11. (Original) A method as claimed in claim 8 wherein the step of receiving the message comprises steps of:

receiving a connection request message; and

inspecting the connection request message to remove three identifiers; a requesting party identifier, a service subscriber identifier, and a VMS identifier.

12. (Original) A method as claimed in claim 11 wherein the step of receiving a connection request message comprises a step of receiving over an Internet protocol (IP) connection, from a server on the Internet adapted to receive click-to-voice mail notifications

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from at least one worldwide web page, a connection request message that conforms to a predefined format and includes directory numbers for the requesting party, service subscriber and VMS.

13. (Original) A method as claimed in claim 12 further comprising steps of:
- initiating an establishment of a call connection between the requesting party's DN and a virtual instance of a call control node (CCN) prior to the step of sending;
 - and
 - effecting an extension of the call connection from the virtual instance of the CCN to the VMS with the step of sending.
14. (Currently Amended) A method as claimed in claim 11 wherein the step of receiving comprises a step-receiving a reconnect request message from call termination equipment, the reconnect connect message including a DN of the call termination equipment, a DN of the requesting party, a DN of the service subscriber and a DN of the VMS.
15. (Original) A method as claimed in claim 14 further comprising steps of:
- effecting a forward release of a part of the established call connection between a virtual instance of the CCN and the call termination equipment; and
 - initiating an establishment of an extension the established call connection from the virtual instance of the CCN to the VMS with the step of sending.
16. – 51. (Previously Cancelled)
52. (Currently Amended) A method of providing direct access to a voice mail box of a service subscriber without first attempting to complete a call to the service subscriber to a voice mail system (VMS) in a telephone network, comprising:
- receiving a request for a direct connection to the voice mail box of the service subscriber from a requesting party; and

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formulating a call setup message for initiating establishment of a call connection between the requesting party and the voice mail box in response to the request for a direct connection to the voice mail box, the call setup message having a format reserved for a redirected call setup message issued by a service switching point (SSP) in response to an uncompleted call to the service subscriber.

~~a step of providing a directory service that permits a requesting party to request a direct call connection to the service subscriber's voice mail box without first attempting to complete a call to the service subscriber.~~

53. (Currently Amended) The method as claimed in claim 52 further comprising a ~~step of~~ formulating a message that is sent to a call control application to request the call connection to the voice mail box in response to the request for a direct connection to the voice mail box; and wherein the formulating a call setup message is in response to the call control application receiving the message~~when the requesting party requests a direct connection to the voice mail box of the service subscriber.~~

54. (Currently Amended) The method as claimed in claim 52, ~~wherein 52 further comprising a step of receiving the request for a direct connection to the voice mail box comprises receiving at the call control application, the message sent when an indication that the requesting party selected the~~ click to voice mail option.

55. (Cancelled)

56. (Currently Amended) The method as claimed in claim ~~52~~55 further comprising ~~a step of~~ sending the call setup message into a common channel signal~~signaling~~ the CCS network to initiate the establishment of the call connection between a calling number supplied by the requesting party and the voice mail box of the service subscriber.

57. (Currently Amended) The method as claimed in claim ~~53, 56~~ wherein ~~the step of~~ formulating a message that is sent to the call control application ~~further comprises a step of:~~

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formulating a data message sent to the call control application, the data message including a calling party number ~~input by~~for the requesting party, a called party number corresponding to a directory number (DN) of the service subscriber, and a directory number (DN) used for direct access to the ~~VMS~~voice mail box of the service subscriber.

58. (Currently Amended) The method as claimed in claim 56 wherein ~~the step of~~formulating the call setup message comprises:

formulating a first call setup message for establishing a call connection with the calling party number ~~for input by~~the requesting party; and
formulating a second call setup message for establishing a call connection with the DN of the voice mail box~~VMS~~.

59. (Currently Amended) The method as claimed in claim ~~57~~58 further comprising ~~steps of~~:

sending the first call setup message into a common channel signaling network ~~of the switched telephone network~~ to connect the calling number ~~supplied by~~for the requesting party to a first end of an enhanced ISUP trunk associated with the call control node; and
sending the second call setup message into a common channel signaling network ~~of the switched telephone network~~ to connect the ~~VMS~~voice mail box to a second end of the enhanced ISUP trunk.

60. (Currently Amended) The method as claimed in claim ~~58~~59 wherein formulating the second call setup message comprises ~~steps of~~:

instantiating an integrated users digital network-user part (ISUP) initial address message (IAM) at the call control application;
inserting ~~the~~ DN of the voice mail box~~VMS~~ into a called party number parameter in the IAM; and
inserting a redirecting number parameter, an original called number parameter, and a redirection information parameter into the IAM.

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61. (Currently Amended) The method as claimed in claim 60 wherein ~~the step of~~ inserting the redirecting number parameter comprises ~~a step of~~ inserting the calling number ~~for DN associated with the calling~~the requesting party in the redirecting number parameter.

62. (Currently Amended) The method as claimed in claim 60 wherein ~~the step of~~ inserting the original called number parameter comprises ~~a step of~~ inserting the DN associated with the service subscriber into the redirecting number parameter.

63. – 65. (Cancelled)

66. (New) A method of providing direct access to a voice mail box of a service subscriber without first attempting to complete a call to the service subscriber comprising:

receiving a request for a direct connection to the voice mail box of the service subscriber from a requesting party via a data network;

receiving a calling number for the requesting party via the data network;

triggering the establishment of a call connection between the calling number for the requesting party and the voice mail box in response to the request for a direct connection to the voice mail box.

67. (New) The method as claimed in claim 66, wherein the triggering comprises formulating a message that is sent to a call control application to request the call connection to the voice mail box, the message comprising the calling number for the requesting party.

68. (New) The method as claimed in claim 66, wherein the triggering comprises formulating a call setup message for initiating establishment of a call connection between the calling number for the requesting party and the voice mail box.

69. (New) The method as claimed in claim 66, wherein the triggering comprises: formulating a message that is sent to a call control application to request the call connection to the voice mail box, the message comprising the calling number for the requesting party; and

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formulating a call setup message for initiating establishment of a call connection between the calling number for the requesting party and the voice mail box in response to the call control application receiving the message.

70. (New) The method as claimed in claim 66, wherein receiving the request for a direct connection to the voice mail box comprises receiving an indication that the requesting party selected a click to voice mail option.

71. (New) The method as claimed in claim 66, wherein receiving the calling number for the requesting party via the data network comprises receiving from the requesting party the calling number for the requesting party using a graphical user interface.

72. (New) The method as claimed in claim 66, wherein receiving the calling number for the requesting party via the data network comprises retrieving the calling number for the requesting party from a website cookie.

73. (New) The method as claimed in claim 69 further comprising sending the call setup message into a common channel signal network to initiate the establishment of the call connection between the calling number for the requesting party and the voice mail box of the service subscriber.

74. (New) The method as claimed in claim 69, wherein formulating a message that is sent to the call control application comprises:

formulating a data message sent to the call control application, the data message including the calling party number for the requesting party, a called party number corresponding to a directory number (DN) of the service subscriber, and a directory number (DN) used for direct access to the voice mail box of the service subscriber.

75. (New) The method as claimed in claim 74 wherein formulating the call setup message comprises:

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formulating a first call setup message for establishing a call connection with the calling party number for the requesting party; and
formulating a second call setup message for establishing a call connection with the DN of the voice mail box.

76. (New) The method as claimed in claim 75 further comprising:
sending the first call setup message into a common channel signaling network to connect the calling number for the requesting party to a first end of an enhanced ISUP trunk associated with the call control node; and
sending the second call setup message into a common channel signaling network to connect the voice mail box to a second end of the enhanced ISUP trunk.
77. (New) The method as claimed in claim 76, wherein formulating the second call setup message comprises:
instantiating an integrated users digital network-user part (ISUP) initial address message (IAM) at the call control application;
inserting the DN of the voice mail box into a called party number parameter in the IAM; and
inserting a redirecting number parameter, an original called number parameter, and a redirection information parameter into the IAM.
78. (New) The method as claimed in claim 77, wherein inserting the redirecting number parameter comprises inserting the calling number for requesting party in the redirecting number parameter.
79. (New) The method as claimed in claim 77, wherein the step of inserting the original called number parameter comprises inserting the DN associated with the service subscriber into the redirecting number parameter.